

# NNP-1 (A-14): sc-83323

## BACKGROUND

Novel nuclear protein 1 (NNP-1), also known as RRP1-like protein or nucleolar protein Nop52, is a 461 amino acid protein belonging to the RRP1 family. Localized to the nucleolus, NNP-1 has simian virus 40-type and bipartite nuclear localization signals and four coiled-coil domains within its C-terminal region. NNP-1 has been found to play an important role in the generation of 28S rRNA in the late processing steps of ribosome biogenesis. At the end of mitosis, nucleolar proteins assemble in a sequential order during the rebuilding of the nucleolus. NNP-1 assembles after Fibrillarin and C23, and simultaneously with B23 and POP1 in the prenucleolar body pathway.

## REFERENCES

- Jansen, E., et al. 1997. The NNP-1 gene (D21S2056E), which encodes a novel nuclear protein, maps in close proximity to the cystatin B gene within the EPM1 and APECED critical region on 21q22.3. *Genomics* 42: 336-341.
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- Savino, T.M., et al. 2001. Nucleolar assembly of the rRNA processing machinery in living cells. *J. Cell Biol.* 153: 1097-1110.
- Scherl, A., et al. 2002. Functional proteomic analysis of human nucleolus. *Mol. Biol. Cell* 13: 4100-4109.
- Zharskaia, O.O., et al. 2005. Assembly of nucleolus-derived foci in various cultured mammalian cells during mitosis. *Tsitologiya* 47: 780-788.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610653. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Zharskaya, O.O., et al. 2008. Effect of roscovitine, a selective cyclin B-dependent kinase 1 inhibitor, on assembly of the nucleolus in mitosis. *Biochemistry* 73: 411-419.

## CHROMOSOMAL LOCATION

Genetic locus: RRP1 (human) mapping to 21q22.3; Rrp1 (mouse) mapping to 10 C1.

## SOURCE

NNP-1 (A-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of NNP-1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, ready P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

NNP-1 (A-14) is recommended for detection of NNP-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other RRP family members.

NNP-1 (A-14) is also recommended for detection of NNP-1 in additional species, including bovine.

Suitable for use as control antibody for NNP-1 siRNA (h): sc-91534, NNP-1 siRNA (m): sc-150012, NNP-1 shRNA Plasmid (h): sc-91534-SH, NNP-1 shRNA Plasmid (m): sc-150012-SH, NNP-1 shRNA (h) Lentiviral Particles: sc-91534-V and NNP-1 shRNA (m) Lentiviral Particles: sc-150012-V.

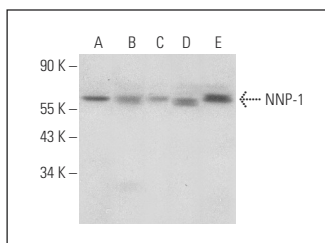
Molecular Weight of NNP-1: 52 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, RAW 264.7 nuclear extract: sc-24961 or Sol8 nuclear extract: sc-2157.

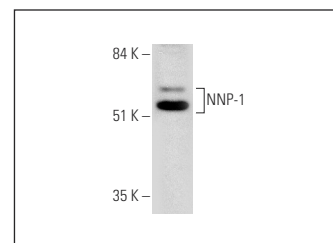
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



NNP-1 (A-14): sc-83323. Western blot analysis of NNP-1 expression in RAW 264.7 (A), F9 (B), Sol8 (C), LADMAC (D) and KNRK (E) nuclear extracts.



NNP-1 (A-14): sc-83323. Western blot analysis of NNP-1 expression in Jurkat nuclear extract.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **NNP-1 (A-6): sc-398970**, our highly recommended monoclonal alternative to NNP-1 (A-14).